

Claims

1. An intraocular lens configured to reduce or eliminate oblique incident light photic disturbances in the eye, said lens comprising anterior and posterior surfaces defining a central visually transparent lens optic extending from said anterior to said posterior surfaces and a peripheral portion outside of the central lens optic, wherein the optical properties of the peripheral portion are selected such that oblique incident light focusing on said peripheral portion is diminished or refracted laterally or anteriorly as opposed to posteriorly.
2. An intraocular lens according to claim 1 wherein the peripheral portion of said anterior and said posterior surfaces extends from the central optic to a perimeter of the lens.
3. An intraocular lens according to claim 2 wherein the intraocular lens is disc shaped and said peripheral portion is disposed circumferentially outside the central visually transparent lens optic.
4. An intraocular lens according to claim 1 wherein said peripheral portion is visually transparent.
5. An intraocular lens according to claim 1 wherein said peripheral portion includes a light absorbing material.
6. An intraocular lens according to claim 1 wherein said peripheral portion is treated to diminish peripheral light focusing.
7. An intraocular lens according to claim 6 is treated by laser, or deposition of opaque or light absorbing pigment particles.
8. An intraocular lens according to claim 1 wherein the anterior and/or posterior

surface curvature is adjusted to refract oblique incident light on the peripheral portion forward of the nasal retina in the eye.

9. An intraocular lens according to claim 8 wherein the oblique incident light is focused onto the non-retinal ciliary body.
10. An intraocular lens according to claim 8 wherein said oblique incident light is in the range 71° - 89° .
11. An intraocular lens according to claim 8 wherein anterior and posterior surface curvature is adjusted by ray tracing.
12. An intraocular lens which is foldable.
13. An ocular lens according to claim 1 which is selected from an intraocular lens, artificial cornea and contact lens.
14. An ocular lens according to claim 1 or 2 which is an intraocular lens for the treatment of cataract.
15. An intraocular lens according to claim 1 which includes one or more haptics extending from peripheral portion for securing the intraocular lens in the eye.
16. A method for the production of an intraocular lens configured to reduce or eliminate incident light photic disturbances, said lens having an anterior surface and a posterior surface defining a central visually transparent lens optic extending from said anterior surface to said posterior surface and a peripheral portion outside of the central optic, wherein the optical properties of the peripheral portion are selected such that oblique incident light focusing said peripheral portion is minimised, or refracted laterally or anteriorly as opposed to posteriorly.

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17. A method for the production of an intraocular lens configured to reduce or eliminate oblique incident light photic disturbances, said lens having an anterior surface and a posterior surface defining a central visually transparent lens optic extending from said anterior to said posterior surface, and a peripheral portion outside of the central lens optic, comprising selecting an anterior surface radius, selecting a posterior surface radius, selecting a centre thickness, selecting a lens diameter and refractive index and calculating ray traces at an angle of incidence of light in the range 71° to 89° and selecting those conditions which focus light laterally or anteriorly.
18. A method according to claim 16 wherein said peripheral portion is treated to diminish peripheral light focusing.
19. A method according to claim 17 wherein the anterior and/or posterior surface curvature is adjusted to refract oblique incident light forward of the nasal retina in the eye.